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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/564,968

Applicant(s)

YUKAWA ET AL.

Examiner

SATHAVARAM I. REDDY

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/5/2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 15-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Claims 15-20 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claims 15-20 are drawn to a method and a first action on the merits has been made on claims 1-14 drawn to the product.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 15-20 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claims 1 and 14 are indefinite in that it is not clear what is meant by the limitation "the high-refractive glass beads are disposed in a part of the binder layer where the

print resin layer is not formed". Both claims 1 and 14 specify that the print resin layer is on the binder layer and this limitation specifies that the print resin layer is not in the binder layer the high-refractive glass beads are disposed.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4, 6, 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Faykish et al (US 5,866,236) in view of Ochi et al (US 5,812,316) and further in view of Araki et al (US 5,714,223).

Regarding claim 1, Faykish et al (US 5,866,236) discloses a retroreflective sheet for security comprising a binder layer (Fig. 1 #70 "spacing resin"; col. 3, lines 39-46), high-refractive index glass beads (Fig. 1 #60 "glass microspheres"; col. 3, lines 39-46), a print resin layer (Fig. 1 #170 "pattern coated layer"; col. 5, lines 16-29), a focusing layer (Fig. 1 #120 "tie layer"; col. 4, lines 41-49), a metal layer (Fig. 1 #30 "reflective layer; col. 3, lines 6-30) and a pressure-sensitive adhesive layer (Fig. 1 #150 "adhesive"; col. 5, lines 1-29) where the print resin layer forms a mark on the binder layer (Fig. 1 #170 "pattern coated layer"; col. 5, lines 16-29), the high-refractive index

glass beads are disposed in the binder layer where the print resin layer is not formed (Fig. 1 #60 "glass microspheres"; col. 3, lines 39-46) and where the position for disposing the high-refractive index glass beads does not coincide with the surface layer side in the thickness direction of the retroreflective sheet (Fig. 1; col. 3, lines 39-46; col. 5, lines 16-29). It can be seen in Fig. 1 that the high-refractive glass beads do not coincide with the print resin layer. Also, the print resin layer is formed on the binder layer and is not disposed in the binder layer where the high-refractive glass beads are formed.

Faykish et al (US 5,866,236) does not appear to explicitly disclose the retroreflective sheet comprising a surface layer and the print resin layer made of a composition containing a room temperature curing resin as a main component.

However, Ochi et al (US 5,812,316) discloses the retroreflective sheet comprising a surface layer ("protective film"; col. 8, lines 24-35).

Araki et al (US 5,714,223) discloses the retroreflective sheet comprising the print resin layer made of a composition containing a room temperature curing resin as a main component ("print layer"; col. 11, lines 27-37).

Regarding claim 2, Faykish et al (US 5,866,236) discloses the retroreflective sheet comprising the binder layer made of a composition comprising a thermosetting

resin (Fig. 1 #70 "spacing resin"; col. 3, lines 39-46). The binder layer of Faykish et al (US 5,866,236) can be made of polyester which is considered a thermosetting resin.

Regarding claim 3, Faykish et al (US 5,866,236) discloses the retroreflective sheet comprising a self-destructive layer between a focusing layer and the metal layer (Fig. 1 #20 "structured layer"; col. 3, lines 6-30).

Regarding claim 4, Faykish et al (US 5,866,236) discloses the retroreflective sheet comprising the self-destructive layer made of a resin composition having low adhesion with the metal layer (Fig. 1 #20 "structured layer"; col. 3, lines 6-30). The resin composition having low adhesion with the metal layer is an acrylic material such as acrylate monomers.

Regarding claim 6, Faykish et al (US 5,866,236) discloses the retroreflective sheet comprising the self-destructive layer comprising a hologram of diffraction grating (Fig. 1 #20 "structured layer"; col. 3, lines 6-30).

The subjecting of a fragile film or supporting film to regular or irregular treatment is a process limitation in a product claim.

"Even though the product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of

a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." (In re Thorpe, 227 USPQ 964,966) Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product (In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983), MPEP 2113).

Regarding claim 7, Faykish et al (US 5,866,236) discloses the retroreflective sheet comprising the binder layer made of polyester (Fig. 1 #70 "spacing resin"; col. 3, lines 39-46).

Faykish et al (US 5,866,236) does not appear to explicitly disclose the retroreflective sheet comprising a surface layer made of polyester.

However, Ochi et al (US 5,812,316) discloses the retroreflective sheet comprising a surface layer made of polyester ("protective film"; col. 8, lines 24-35).

Both the surface layer of Ochi et al (US 5,812,316) and the binder layer of Faykish et al (US 5,866,236) are made of polyester.

Regarding claim 14, Faykish et al (US 5,866,236) discloses a retroreflective sheet for security comprising a binder layer (Fig. 1 #70 "spacing resin"; col. 3, lines 39-46), high-refractive index glass beads (Fig. 1 #60 "glass microspheres"; col. 3, lines 39-46), a print resin layer (Fig. 1 #170 "pattern coated layer"; col. 5, lines 16-29), a focusing layer (Fig. 1 #120 "tie layer"; col. 4, lines 41-49) and a metal layer (Fig. 1 #30 "reflective layer"; col. 3, lines 6-30) where the print resin layer forms a mark on the binder layer (Fig. 1 #170 "pattern coated layer"; col. 5, lines 16-29), the high-refractive index glass beads are disposed in the binder layer where the print resin layer is not formed (Fig. 1 #60 "glass microspheres"; col. 3, lines 39-46) and where the position for disposing the high-refractive index glass beads does not coincide with the surface layer side in the thickness direction of the retroreflective sheet (Fig. 1; col. 3, lines 39-46; col. 5, lines 16-29). It can be seen in Fig. 1 that the high-refractive glass beads do not coincide with the print resin layer. Also, the print resin layer is formed on the binder layer and is not disposed in the binder layer where the high-refractive glass beads are formed.

Faykish et al (US 5,866,236) does not appear to explicitly disclose the retroreflective sheet comprising a surface layer and the print resin layer made of a composition containing a room temperature curing resin as a main component.

However, Ochi et al (US 5,812,316) discloses the retroreflective sheet comprising a surface layer ("protective film"; col. 8, lines 24-35).

Araki et al (US 5,714,223) discloses the retroreflective sheet comprising the print resin layer made of a composition containing a room temperature curing resin as a main component ("print layer"; col. 11, lines 27-37).

Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223) are analogous art because they are from the same field of retroreflective sheets.

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Faykish et al (US 5,866,236) and Ochi et al (US 5,812,316) before him or her, to modify the retroreflective sheet of Faykish et al (US 5,866,236) to include the surface layer of Ochi et al (US 5,812,316) in that having the surface layer provides high mechanical strength (col. 8, lines 36-38).

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Faykish et al (US 5,866,236) and Araki et al (US 5,714,223) before him or her, to modify the retroreflective sheet of Faykish et al (US 5,866,236) to include the print resin layer composition of Araki et al (US 5,714,223) in that having the required print resin composition provides improved adhesion of the print resin layer (col. 11, lines 27-37).

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223) in view of Rivera et al (US 2005/0179253).

Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223) are relied upon as described above.

Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223) do not appear to explicitly disclose the retroreflective sheet comprising a self-destructive layer disposed on the pressure-sensitive adhesive layer and in between a pressure-sensitive adhesive layer and a metal layer.

However, Rivera et al (US 2005/0179253) discloses the retroreflective sheet comprising a self-destructive layer disposed on the pressure-sensitive adhesive layer and in between a pressure-sensitive adhesive layer and a metal layer (paragraph [0028]).

The metal layer is discussed by Faykish et al (US 5,866,236) and the self-destructive layer disposed on the pressure-sensitive adhesive layer can be disposed on the metal layer thus having a self-destructive layer in between a metal layer and pressure-sensitive adhesive layer.

Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223) and Rivera et al (US 2005/0179253) are analogous art because they are from the same field of retroreflective sheets.

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223) and Rivera et al (US 2005/0179253) before him or her, to modify the retroreflective sheet of Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223) to include the self-destructive layer between a pressure-sensitive adhesive and metal layer of Rivera et al (US 2005/0179253) in that having a self-destructive layer in between a pressure-sensitive adhesive layer provides security for product authentication (paragraph [0005], lines 1-5).

8. Claims 8, 9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223) in view of Pearce et al (US 5,342,821).

Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223) are relied upon as described above.

Regarding claim 8, Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223) do not appear to explicitly disclose a surface resin layer, an image formation resin layer and a dye migration preventive resin layer in order.

However, Pearce et al (US 5,342,821) discloses the retroreflective sheet comprising a surface resin layer ("support"; col. 5, lines 34-39), an image formation resin layer ("dye image-receiving layer"; col. 5, lines 57-68) and a dye migration preventive resin layer ("dye-migration barrier layer"; col. 8, lines 13-18) in order.

The surface resin layer having a weak affinity with the sublimable dye and allowing the sublimable dye to penetrate, the image formation resin layer having an affinity with the sublimable dye and a dye migration preventive layer preventing migration of the sublimable dye are intended use limitations.

The limitation(s) "the surface resin layer having a weak affinity with the sublimable dye and allowing the sublimable dye to penetrate, the image formation resin layer having an affinity with the sublimable dye and a dye migration preventive layer preventing migration of the sublimable dye" is (an) intended use limitation(s) and is not further limiting in so far as the structure of the product is concerned. Note that "in apparatus, article, and composition claims, intended use must result in a **structural difference** between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. **If the prior art structure is**

capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art." [emphasis added] *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967); *In re Otto*, 312 F.2d 937, 938, 136 USPQ 458, 459 (CCPA 1963). See MPEP § 2111.02.

Regarding claim 9, Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223) do not appear to explicitly disclose the retroreflective sheet comprising the dye migration preventive layer being a resin layer containing a vinyl resin.

However, Pearce et al (US 5,342,821) discloses the retroreflective sheet comprising the dye migration preventive layer being a resin layer containing a vinyl resin ("dye-migration barrier layer"; col. 7, lines 10-22; col. 8, lines 13-18).

In regard to the glass transition temperature of 70 °C and a SP value of 9.0 or more, it is given that Pearce et al (US 5,342,821) disclosing the dye migration preventive layer being a resin layer containing a vinyl resin as a main component to inherently have the glass transition temperature of 70 °C and a SP value of 9.0 or more.

Regarding claim 13, Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223) do not appear to explicitly disclose the retroreflective sheet

comprising the image formation resin layer being a resin layer and containing a low-molecular weight compound with a molecular weight of 1300 or less in an amount of 0% to 20% inclusive.

However, Pearce et al (US 5,342,821) discloses the retroreflective sheet comprising the image formation resin layer being a resin layer and containing a low-molecular weight compound with a molecular weight of 1300 or less in an amount of 0% (col. 5, lines 34-39; col. 5, lines 57-68).

Faykish et al (US 5,866,236), Ochi et al (US 5,812,316), Araki et al (US 5,714,223) and Pearce et al (US 5,342,821) are analogous art because they are from the same field of retroreflective sheets.

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Faykish et al (US 5,866,236), Ochi et al (US 5,812,316), Araki et al (US 5,714,223) and Pearce et al (US 5,342,821) before him or her, to modify the retroreflective sheet of Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223) to include the surface resin layer, image formation resin layer and dye migration preventive layer of Pearce et al (US 5,342,821) in that having a surface resin layer, image formation resin layer and dye migration preventive layer prevents smearing of a dye (col. 1, lines 6-13).

9. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Faykish et al (US 5,866,236), Ochi et al (US 5,812,316), Araki et al (US 5,714,223) and Pearce et al (US 5,342,821) in view of Bourdelais et al (US 6,261,994).

Faykish et al (US 5,866,236), Ochi et al (US 5,812,316), Araki et al (US 5,714,223) and Pearce et al (US 5,342,821) are relied upon as described above.

Regarding claim 10, Faykish et al (US 5,866,236), Ochi et al (US 5,812,316), Araki et al (US 5,714,223) and Pearce et al (US 5,342,821) do not appear to explicitly disclose the retroreflective sheet comprising a dye migration preventive layer having a thickness of 1 μm to 100 μm .

However, Bourdelais et al (US 6,261,994) discloses the retroreflective sheet comprising a dye migration preventive layer having a thickness of 0.20 μm to 1.5 μm (col. 6, lines 57-59; col. 6, line 65-col. 1, line 7).

Bourdelais et al (US 6,261,994) and the claims differ in that film thickness of the dye migration preventive resin layer does not teach the exact same proportions as recited in the instant claims.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the compositional

proportions taught by Bourdelais et al (US 6,261,994) overlap the instantly claimed proportions and therefore are considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference in order to provide optimum reflective properties (col. 4, lines 13-15), particularly in view of the fact that;

"The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages", In re Peterson 65 USPQ2d 1379 (CAFC 2003).

Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

Regarding claim 11, Faykish et al (US 5,866,236), Ochi et al (US 5,812,316), Araki et al (US 5,714,223) and Pearce et al (US 5,342,821) do not appear to explicitly disclose the dye migration preventive layer being a biaxially stretched film.

However, Bourdelais et al (US 6,261,994) discloses the retroreflective sheet comprising the dye migration preventive layer being a biaxially stretched film (col. 4, lines 38-43).

In regard to the stretching of 10% or more in a winding direction and in a width direction, it is given that Bourdelais et al (US 6,261,994) disclosing a biaxially stretched

film which is a film that is stretched in winding and width directions to inherently be stretched 10% or more in a winding direction and in a width direction.

Regarding claim 12, Faykish et al (US 5,866,236), Ochi et al (US 5,812,316), Araki et al (US 5,714,223) and Pearce et al (US 5,342,821) do not appear to explicitly disclose the retroreflective sheet comprising the dye migration preventive layer being a biaxially stretched film.

However, Bourdelais et al (US 6,261,994) discloses the retroreflective sheet comprising the dye migration preventive layer being a biaxially stretched film (col. 4, lines 38-43).

In regard to the shrinkage ratio in a winding direction being 1% or less after being heated for 150 °C or more, it is given that Bourdelais et al (US 6,261,994) disclosing a biaxially stretched film which is a film that is stretched in winding and width directions to inherently have a shrinkage ratio in a winding direction being 1% or less after being heated for 150 °C or more.

Faykish et al (US 5,866,236), Ochi et al (US 5,812,316), Araki et al (US 5,714,223) and Pearce et al (US 5,342,821) and Bourdelais et al (US 6,261,994) are analogous art because they are from the same field of retroreflective sheets.

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Faykish et al (US 5,866,236), Ochi et al (US 5,812,316), Araki et al (US 5,714,223), Pearce et al (US 5,342,821) and Bourdelais et al (US 6,261,994) before him or her, to modify the retroreflective sheet of Faykish et al (US 5,866,236), Ochi et al (US 5,812,316), Araki et al (US 5,714,223) and Pearce et al (US 5,342,821) to include the biaxially stretched film of Bourdelais et al (US 6,261,994) in that having a dye migration preventive resin layer provides optimum reflective properties (col. 4, lines 13-15).

10. Claims 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223) in view of Yukawa et al (US 2005/0148469).

Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223) are relied upon as described above.

Regarding claim 8, Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223) do not appear to explicitly disclose the retroreflective sheet comprising a surface resin layer, an image formation resin layer and a dye migration preventive resin layer in order.

However, Yukawa et al (US 2005/0148469) discloses the retroreflective sheet comprising a surface resin layer, an image formation resin layer and a dye migration preventive resin layer in order (paragraphs [0019], [0020] and [0133]).

The surface resin layer having a weak affinity with the sublimable dye and allowing the sublimable dye to penetrate, the image formation resin layer having an affinity with the sublimable dye and a dye migration preventive layer preventing migration of the sublimable dye are intended use limitations.

Regarding claim 9, Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223) do not appear to explicitly disclose the retroreflective sheet comprising the dye migration preventive layer being a resin layer containing a vinyl resin with a glass transition temperature of 70 °C or more and a SP value of 9.0 or more as a main component.

However, Yukawa et al (US 2005/0148469) discloses the retroreflective sheet comprising the dye migration preventive resin layer being a resin layer containing a vinyl resin with a glass transition temperature of 70 °C or more and a SP value of 9.0 or more as a main component (paragraph [0022]).

Regarding claim 10, Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223) do not appear to explicitly disclose the retroreflective sheet

comprising the film thickness of the dye migration preventive resin layer being 1 μm to 100 μm .

However, Yukawa et al (US 2005/0148469) discloses the retroreflective sheet comprising the film thickness of the dye migration preventive resin layer being 1 μm to 100 μm (paragraph [0139]).

Regarding claim 11, Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223) do not appear to explicitly disclose the retroreflective sheet comprising the dye migration preventive resin layer being a biaxially stretched film that is stretched by 10% or more in a winding direction and in a width direction.

However, Yukawa et al (US 2005/0148469) discloses the retroreflective sheet comprising the dye migration preventive resin layer being a biaxially stretched film that is stretched by 10% or more in a winding direction and in a width direction (paragraph [0023]).

Regarding claim 12, Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223) do not appear to explicitly disclose the retroreflective sheet comprising a shrinkage ratio of the biaxially stretched film in the winding direction of the film after being heated at 150 °C for 30 minutes is 1.0% or less.

However, Yukawa et al (US 2005/0148469) discloses the retroreflective sheet comprising a shrinkage ratio of the biaxially stretched film in the winding direction of the film after being heated at 150 °C for 30 minutes is 1.0% or less (paragraph [0023]).

Regarding claim 13, Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223) do not appear to explicitly disclose the retroreflective sheet comprising the image formation resin layer being a resin layer containing a low-molecular-weight compound with a molecular weight of 1300 or less in an amount of 0% to 20% inclusive.

However, Yukawa et al (US 2005/0148469) discloses the retroreflective sheet comprising the image formation resin layer being a resin layer containing a low-molecular-weight compound with a molecular weight of 1300 or less in an amount of 0% to 20% inclusive (paragraph [0026]).

Faykish et al (US 5,866,236), Ochi et al (US 5,812,316), Araki et al (US 5,714,223) and Yukawa et al (US 2005/0148469) are analogous art because they are from the same field of retroreflective sheets.

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Faykish et al (US 5,866,236), Ochi et al (US 5,812,316), Araki et al (US 5,714,223) and Yukawa et al (US 2005/0148469) before him or her, to

modify the retroreflective sheet of Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223) to include the surface resin layer, image formation resin layer and dye migration preventive resin layer of Yukawa et al (US 2005/0148469) in that having a surface resin layer, image formation resin layer and dye migration preventive resin layer prevents the migration of a sublimable dye and provides sharpness and color density to the image (paragraphs [0004] and [0005]).

Response to Arguments

11. Applicant's arguments filed 1/5/2010 have been fully considered but they are not persuasive.

Applicants argue that Faykish et al (US 5,866,236) does not disclose a position of the high-refractive glass beads not coinciding with the position of the print resin layer and the high-refractive glass beads being disposed in part of the binder layer where the print resin layer is not formed.

The Examiner disagrees and notes that in Fig. 1 of Faykish et al (US 5,866,236) it can be seen that the print resin layer is formed on the binder layer and that the high-refractive glass beads are disposed in the binder layer. Both the print resin layer and the high-refractive glass beads are in different positions in the retroreflective sheet and do not coincide with each other. Also, the print resin layer is formed on the binder layer and is not disposed in the binder layer where the high-refractive glass beads are formed.

Applicants argue that Ochi et al (US 5,812,316) and Araki et al (US 5,714,223) do not cure the deficiencies of Faykish et al (US 5,866,236).

The Examiner disagrees and notes that Ochi et al (US 5,812,316) is a teaching reference used to teach a surface layer and that Araki et al (US 5,714,223) is a teaching reference used to teach the print resin layer composition.

However, note that while Ochi et al (US 5,812,316) does not disclose all the features of the present claimed invention, Ochi et al (US 5,812,316) is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely the surface layer, and in combination with the primary reference, discloses the presently claimed invention.

However, note that while Araki et al (US 5,714,223) does not disclose all the features of the present claimed invention, Araki et al (US 5,714,223) is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely the print resin layer

composition, and in combination with the primary reference, discloses the presently claimed invention.

Applicants argue that Rivera et al (US 2005/0179253) does not cure the deficiencies of Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223).

The Examiner disagrees and notes that Rivera et al (US 2005/0179253) is a teaching reference used to teach a self-destructive layer disposed on the pressure-sensitive adhesive layer.

However, note that while Rivera et al (US 2005/0179253) does not disclose all the features of the present claimed invention, Rivera et al (US 2005/0179253) is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely a self-destructive layer disposed on the pressure-sensitive adhesive layer, and in combination with the primary reference, discloses the presently claimed invention.

Applicants argue that Pearce et al (US 5,342,821) does not cure the deficiencies of Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223).

The Examiner disagrees and notes that Pearce et al (US 5,342,821) is a teaching reference used to teach the surface resin layer, image formation resin layer and dye migration preventive layer.

However, note that while Pearce et al (US 5,342,821) does not disclose all the features of the present claimed invention, Pearce et al (US 5,342,821) is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely the surface resin layer, image formation resin layer and dye migration preventive layer, and in combination with the primary reference, discloses the presently claimed invention.

Applicants argue that Bourdelais et al (US 6,261,994) does not cure the deficiencies of Faykish et al (US 5,866,236), Ochi et al (US 5,812,316), Araki et al (US 5,714,223) and Pearce et al (US 5,342,821).

The Examiner disagrees and notes that Bourdelais et al (US 6,261,994) is a teaching reference used to teach the biaxially stretched film.

However, note that while Bourdelais et al (US 6,261,994) does not disclose all the features of the present claimed invention, Bourdelais et al (US 6,261,994) is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely the biaxially stretched film, and in combination with the primary reference, discloses the presently claimed invention.

Applicants argue that Yukawa et al (US 2005/0148469) does not cure the deficiencies of Faykish et al (US 5,866,236), Ochi et al (US 5,812,316) and Araki et al (US 5,714,223).

The Examiner disagrees and notes that Yukawa et al (US 2005/0148469) is a teaching reference used to teach the surface resin layer, image formation resin layer and dye migration preventive resin layer.

However, note that while Yukawa et al (US 2005/0148469) does not disclose all the features of the present claimed invention, Yukawa et al (US 2005/0148469) is used

as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely the surface resin layer, image formation resin layer and dye migration preventive resin layer, and in combination with the primary reference, discloses the presently claimed invention.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SATHAVARAM I. REDDY whose telephone number is (571) 270-7061. The examiner can normally be reached on 8:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Ruthkosky can be reached on (571) 272-1291. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Ruthkosky/
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/SATHAVARAM I REDDY/
Examiner
Art Unit 1794